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Form I (Rev. 1	PTO-1390 U.S. DEPARTMENT OF COMM 1-98)	ERCE PATENT AND TRADEMARK OFFICE	Attorney's Docket Number 18617-0001					
	DESIGNATED/ELECTI CONCERNING A FILIN	TO THE UNITED STATES ED OFFICE (DO/EO/US) G UNDER 35 U.S.C. 371	U.S. Application No. (if known, see 37 CFR 1.5)					
PCT	national Application No. 7/IB00/00104	International Filing Date 2 February 2000	Priority Date Claimed 3 February 1999					
	Title of Invention  GOLF TEE							
Applicant(s) for DO/EO/US  CROUSE, Jason Lee								
other 1. [2. [3. [4. [5. [2. [4. [5. [2. [4. [4. [4. [4. [4. [4. [4. [4. [4. [4	DO/EO/US) the following items and U.S.C. 371.  U.S.C. 371.  Ining a filing under 35 U.S.C. 371.  U.S.C. 371(f) at any time rather than set in 35 U.S.C. 371(b) and PCT made by the 19th month from the 2))  by the International Bureau).  States Receiving Office (RO/US). quired as the application was filed in PCT Article 19 (35 U.S.C. 371(c)(3)) by the International Bureau).  uuch amendments has NOT expired.  9 (35 U.S.C. 371(c)(3)).  allable. (35 U.S.C. 371(c)(4)). allable. (35 U.S.C. 371(c)(4)). attion Report under PCT Article 36							
Items   1. to   16. below concern document(s) or information included:   11.								



Date: August 3, 2001

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Statement must	also be filed (Note 3	37 CFR 1.9, 1.27, 1					
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GOLF TEE

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## BACKGROUND OF THE INVENTION

This invention relates to a device, in particular a golf tee, for supporting an object such as a golf ball on a ground surface such as the surface of a teeing mound.

Golf tees are usually made from wooden or plastics materials. Although these materials are softer than the metal club face of a golf club, in use the tees do sometimes damage the club face. In use the tee is also often broken and broken tees tend to litter golf courses and cause damage to mower blades on the golf course.

South African patent no. 67/5576 discloses a golf tee which is made up of two parts. The first part defines a rigid shaft for the tee and the second part defines a cup for the tee. The cup, which is arranged to support a golf ball, is made from a yieldable material and is designed to absorb impact when it is struck by the face of a golf club. The object of this is to stop the tee from breaking and also to cause less damage to the club face. However, in practice, this type of tee does break and also causes damage to the club face especially if the club face strikes the rigid shaft.

United Kingdom patent no. GB 2258161 discloses a golf tee comprising a base which includes a shaft which is arranged to be pushed into a ground surface, such as teeing mound, and bristles which extend vertically from the base for supporting a golf ball. A problem with the tee as illustrated in this patent is that the bristles as shown provide a very narrow support surface for a golf ball and a golf ball is likely to fall off this tee during use.

It is an object of this invention to provide a golf tee that addresses these problems.

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## SUMMARY OF THE INVENTION

According to the invention there is provided a golf tee for supporting a golf ball on a ground surface, such as a teeing mound, the golf tee including:

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- a base defining an operatively upper face and an opposed operatively lower face:
- a pointed shaft extending from the lower face, which is arranged to be pushed into the ground surface; and
- a plurality of bristles which extend from the upper face of the base in a vertical orientation relative to the base, wherein the bristles are arranged to define an annular support surface for supporting the golf ball, the annular support surface having an inside radius of 5mm and an outside radius of 7.5mm.

Advantageously, the bristles are arranged in clusters, typically from 6 to 15 clusters, with from 10 to 25 bristles per cluster.

The bristles are preferably made from nylon and have a thickness of 0,4mm.

Typically, the upper face of the base is circular in shape and has a width of 18mm

# BRIEF DESCRIPTION OF THE DRAWINGS

- Figure 1 is a side view of a golf tee according to the invention supporting a golf ball:
- Figure 2 is a cross-sectional side view of the golf tee of Figure 1, with the support bristles removed; and

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Figure 3 is a top view of the golf tee of Figure 1, with the support bristles removed.

#### DETAILED DESCRIPTION OF THE INVENTION

Referring to Figure 1, a golf tee according to the invention, for supporting a golf ball 12 on a ground surface 14, is shown generally by the numeral 10. The golf tee 10 includes a base 15 defining an operatively upper face 18 and an operatively lower face 20. A pointed shaft 22 extends from the lower face 20 and support bristles 24 which are elongate and resilient extend from the upper face 18. The support bristles 24 define an annular upper support surface 26 which supports the golf ball 12. The annular support surface 26 has an inner radius  $R_1$  of 5mm and an outer radius  $R_2$  of 7,5mm. The support bristles 24 are made of nylon and have a thickness of 0,4mm. The support bristles 24 are arranged in clusters 28 of about twenty bristles per cluster. There are twelve clusters 28 of bristles 24.

Referring to Figure 2, the base 16 is formed integrally with the shaft 22 and is typically moulded from a hard plastics material such as acrylonitrile butadine styrene (ABS plastic). The length L of the shaft 22 depends on the ground surface on which the golf tee is to be used. Typically, the shaft 22 has a length of about 30mm.

Referring now also to Figure 3, the upper face 18 of the base 16 is circular in shape and has a width W of 18mm. A series of holes 30, (in this case twelve holes), are formed in the upper face 18. The twelve holes are arranged in a circular formation. About twenty bristles are inserted into each hole 30, to form the clusters 28 shown in Figure 1.

in use, the shaft 22 of the golf tee 10 is inserted into a ground surface such as a tee mound until the lower face 20 of the base 16 comes into contact with the ground surface. A golf ball 12 is placed on top of the support

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surface 26 defined by the bristles 24 and the golfer then hits the ball 12 off the golf tee with the club face of a golf club (not shown).

The advantage of the golf tee 10 according to the invention is that when the ball is hit, the face of the golf club only comes into contact with and passes through the soft resilient bristles 24 of the tee. The soft resilient bristles 24 do not damage the club face and provide very little resistance or deflection to the club face when the golf ball is hit. Another advantage is that (unless the club face hits the base 16) the tee is not broken when a ball is hit. This saves golf tees and there is less littering of a golf course with broken golf tees.

Referring to Figure 1, the height H of the support bristles 24 may vary from 30mm to 10mm, depending on the golf club used and the preference of the golfer. In practice, the golf tee 10 according to the invention is provided with support bristles 24 with heights H of 27mm, 22mm or 15mm. A golfer can then select the tee height that he or she wishes to use.

Although this invention has been described for supporting golf balls, it is envisaged that it may be used for supporting other types of balls that require a support from which they are hit or kicked.

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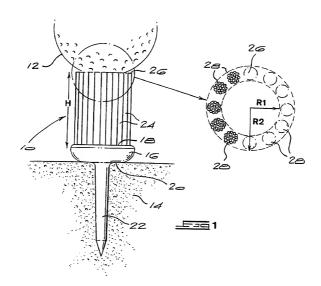
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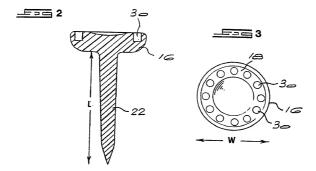
#### CLAIMS

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- A golf tee (10) for supporting a golf ball (12) on a ground surface (14), the golf tee (10) including:
  - a base (16) defining an operatively upper face (18) and an opposed operatively lower face (20); a pointed shaft (22) extending from the lower face (20), which is arranged to be pushed into the ground surface (14); and a plurality of bristles (24) which extend from the upper face (18) of the base (16) in a vertical orientation relative to the base (16), wherein the bristles (24) are arranged to define an annular support surface (26) for supporting the golf ball (12), characterized in that the annular support surface (26) has an inside radius (R1) of 5mm and an outside radius (R2) of 7,5mm.
- A golf tee according to claim 1 wherein the bristles (24) are arranged in clusters (28) with from 10 to 25 bristles per cluster.
- A golf tee according to claim 2 wherein the bristles (24) are nylon bristles and have a thickness of 0.4mm.
- A golf tee according to any one of the preceding claims wherein the upper face (18) of the base (16) is circular in shape and has a width (w) of 18mm.

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# (Foreign associate use only) DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:									
My residence, post office address, and citizenship are as stated below next to my name: I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: Golf Tee, the specification of which is attached hereto.    Was filed on August 3, 2001 as U.S. Application No. 09/890,903.									
I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above. I do not know and do not believe that the same was ever known or used by others in the United States of America before my or our invention thereof, or patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to the date of this application. I further state that the invention was not in public use or on sale in the United States of America more than one year prior to the date of this application. I understand that I have a duty of candor and good faith toward the Patent and Trademst Office, and I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.									
I hereby claim foreign priority benefits under Title 35, United States Code §119(a)-(d) or §365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate disclosing subject matter in common with the above-identified specification and having a filing date before that of the									
application on which <u>Country</u> ZA	App. No. 99/0825	Date of Filing 3 February 1999		Priority Claimed Under 35 USC §119 YesNoNo					
I hereby claim the benefit under Title 35, United States Code, § 120 of any prior United States application(s), or §365(e) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each claim of the present application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of Title 35, United States Code §112, 1 acknowledge the duty to disclose information which is material to patentiability as defined in Title 37, Code of Federal Regulations §1.56, which became available between the filing date of the prior application and the national or PCT international filing date of this application:  Note:									
I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statement were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may joopardize the validity of the application or any patents issuing thereon.									
I hereby authorize the U.S. attorneys named herein to accept and follow instructions from <b>Spoor &amp; Fisher</b> , as to any action to be taken in the Patent and Trademark Office regarding this application, without direct communication between the U.S. attorney and the undersigned. In the event of a change in the persons from whom instructions may be taken, the U.S. attorney named herein will be notified by the undersigned.									
POWER OF ATTORNEY: The following attorneys are hereby appointed to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: Peter G. Pappas. 33,205; Daniel J. Warren . 34,272; William L. Warren . 36,714; Michael S. Pavento - 42,985; Lisa M. Cobern - 44,669; Robert A. Lester - 24,004; Errinn C. Kelly - 44,822; Jerry C. Liu - P47,754; Kevin W. King - 42,737.									
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Full name of sole or	first inventor: Ja	son Lee Crouse							
Citizenship: Sc	outh Africa			TIENGL TO					
Residence: 50 Hannaben Street, Linksfield Ridge, 2198 Johanneshurg SOUTH AFRICA									
Post Office Address: AS ABOVE  [Inventor's signature Date: 10 September 01									
Inventor's signature				Copocito .					
Additional inventors are boung named on separately numbered sheets attached hereto.									